



## Application of Metacognitive Theory in Foreign Language Teaching Based on Network and Multimedia

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### Abstract

In China network and multimedia technologies have been widely used in foreign language teaching, but they didn't achieve the expected goals. This paper suggests that the proper application of metacognitive theory in foreign language teaching based on network and multimedia technologies can play a positive role in cultivating university students' metacognitive ability and help to improve their language proficiency.

**Key words:** Metacognitive theory; Foreign language teaching; Network and multimedia technologies; Language proficiency

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### INTRODUCTION

After *College English Curriculum Requirements* was promulgated and implemented by the Ministry of Education in 2004, a new round of foreign language reform at universities has taken place across China. The reform aims to make full use of advanced multimedia and network technologies and change the traditional teaching model, so as to arouse the students' enthusiasm and interest in learning a foreign language and improve their language proficiency. But the fact is that though multimedia and network technologies have been widely used in foreign language teaching, they didn't achieve

the expected goals. In fact, neither the students' interest in learning a foreign language has been fully stimulated nor has their language proficiency been improved obviously. Therefore, how to change the above-mentioned situation and make multimedia and online resources play an important and positive role in foreign language teaching has become a major concern in the education world.

### 1. WHY HAVE FOREIGN LANGUAGE TEACHING BASED ON NETWORK AND MULTIMEDIA TECHNOLOGIES FALLEN SHORT OF THEIR GOALS?

After many analyses and researches, we find that there are many reasons why foreign language teaching based on network and multimedia technologies has not obtained the expected effects. First of all, some students don't know the foreign language well, that is, they don't know the basics and characteristics of the language though they have studied it for many years. Therefore, even though there are rich and various forms of online resources, they are beyond the students' ability, thus causing a great waste of these resources. Second of all, although some students have high enthusiasm for learning the foreign language, they are confused about what to do and where to start in the face of numerous multimedia and online resources, for they haven't got the suitable methods to use them. Therefore, over time, their enthusiasm for learning this language will disappear. Thirdly, some students who are weak in self-discipline are apt to become addicted to online chatting and games instead of making good use of these precious network resources, which may cause a great waste of precious time and great damage to their health.

Then how can we overcome the above-mentioned weaknesses to make network and multimedia technologies

play an important role in foreign language teaching? The researches show that the key is to help students master some metacognitive knowledge, strategies and improve their metacognitive ability, which is the prerequisite to improving the students' independent learning ability and language proficiency. In brief, mastering metacognitive theory will help students to use the multimedia and online resources well in studying a foreign language.

## **2. THE STUDY OF METACOGNITIVE THEORY**

### **2.1 The Concept of Metacognition**

The concept of metacognition was first put forward by Flavell in 1976. He held that metacognition is the cognitive subjects' understanding of their psychological state, ability, target and cognitive strategy, as well as the planning, monitoring and adjusting of their own activities (Brown, 1987). After the theory was put forward, great repercussions were brought about in the education world. Both domestic and foreign scholars began to carry out thorough studies of metacognition to analyze and explore the important role of metacognitive theory in teaching, among which the relationship between metacognition and foreign language teaching draws special attention. According to statistics, from 1983 when metacognitive theory was first introduced in domestic periodicals to the end of 2008, more than 1,700 articles on metacognition had been recorded in CNKI, 33.5% of which were related to English teaching (Ding, Zeng, Yang, & Zhang, 2009). Therefore, how to make use of metacognitive theory to promote the development of foreign language teaching has become a widespread concern.

### **2.2 The Elements of Metacognitive Theory**

The core of metacognitive theory is metacognitive ability which mainly includes the mastery and control ability of metacognitive knowledge, metacognitive experience and metacognitive monitoring. Metacognitive knowledge refers to the cognitive subject's understanding of cognitive tasks, cognitive strategies, the cognitive subject himself and other people. Metacognitive experience refers to the emotional experience when the cognitive subject takes part in cognitive activities. While metacognitive monitoring is a process, in which the cognitive subject sets the ongoing one of all cognitive activities as the object of consciousness and unceasingly carries on the positive monitoring, control and regulation of this activity (Flavell, 1985). In general, the elements and characteristics of metacognitive ability are the determining factors that metacognition plays an important role in teaching based on network and multimedia.

## **3. THE ROLES OF METACOGNITIVE THEORY IN FOREIGN LANGUAGE TEACHING BASED ON NETWORK AND MULTIMEDIA TECHNOLOGIES**

### **3.1 Help Students to Set Up New Learning Beliefs and Make Learning Objectives Clear**

In the traditional foreign language teaching model based on network and multimedia technologies, most students mainly depend on the teachers' guidance and supervision to learn foreign languages. Therefore, in the face of numerous network and multimedia resources, they will feel at a loss without the teachers' help. But if they have got metacognitive knowledge and mastered the metacognitive theory, they will get out of this mess, make the learning objectives clear and set up new learning beliefs. The reasons are as follows.

First of all, through the study of metacognitive knowledge, most students can form a correct judgment of themselves and have a profound understanding of their own interests, hobbies, study habits and learning ability, therefore, they can make a further consideration about the necessary measures which should be taken to overcome their own shortcomings and insufficiency, and to adapt to the new environment of learning foreign languages. All in all, the conversion from unconscious behavior to conscious habit will not only make students gradually form a good habit of self-observation and self-judgment, but also make their learning objectives of foreign language clear and form some brand-new learning beliefs.

### **3.2 Help Students to Reflect Positively and Strengthen Self-Regulation**

According to dual coding theory based on cognitive neuroscience, each learner perceives and processes information in different ways. For example, some learners are good at accepting the learning information through visual and sensory stimuli such as charts and pictures, some prefer to accept and grasp the information in the form of recording, and others are only accustomed to the text learning environment. Therefore, in the teaching mode based on multimedia and network technologies, the mastering of metacognitive knowledge and ability will not only make the learners recognize their own cognitive style, but also prompt them to take actions to make their own cognitive activities more adapt to their cognitive style. This is actually a process of reflection. Reflection is not only a process in which the students consciously recollect, rethink, summarize, evaluate and regulate their own cognitive activities, but also the main form in which the students may strengthen their self-consciousness, self-monitoring and self-regulation (Bake & Brown, 1984).

The learners who can reflect positively will pay much more attention to their thinking activities in the process of studying the learning objects and tasks. For example, they

will constantly reflect on whether their learning methods are proper or not while studying a foreign language or whether they have really mastered this language. In the process of reflection, the students can adjust and improve their learning methods in time according to the actual degree to which they have mastered the language. A good habit of reflection is an important factor for foreign language teaching based on network and multimedia technologies to achieve the ideal teaching effect, because reflection is an important process in which the learners can self-evaluate their own learning ability and effectively regulate themselves. In addition, monitor and adjust the learning process effectively is the prerequisite for learners to achieve their learning objectives.

### 3.3 Stimulate Students' Learning Desires and Enhance Their Innovation Capability

In the traditional classroom teaching, the teaching methods are so simple that teachers are the dominators who control all the teaching activities while students are just the passive recipients of knowledge. Therefore, over time, students will completely believe their teachers' authority and get used to one correct answer or solution to each question. In conclusion, the students cultivated in the traditional teaching model don't have desires to challenge the authority, won't raise and solve problems proactively, not to mention the innovation capability.

Although the teaching model based on network and multimedia technologies have changed the above-mentioned situation to some degree, the problem has not been solved completely, for the multimedia and network platform only provides an external teaching environment for students. And it can't be denied that whether the students can effectively learn a foreign language depends more on the accumulation of their metacognitive knowledge and the cultivation of their metacognitive ability, as well as their timely self-monitoring and self-regulation in the learning process. Therefore, once the learners have mastered the indispensable metacognitive knowledge and ability, they will no longer believe books and the authorities blindly. On the contrary, they will put forward questions; they will actively explore the ways and methods to solve problems; their desire of learning will be stimulated; the advantages of college English teaching based on network and multimedia technologies will also

be presented; and finally the personalized needs of the students can be met easily.

## 4. THE CULTIVATION AND TRAINING OF METACOGNITIVE ABILITY

Foreign language teachers should do the following work to make metacognitive theory play its roles in foreign language teaching based on network and multimedia technologies. First of all, the students' metacognitive awareness should be enhanced greatly. Because once the learners realize the importance of metacognitive theory in foreign language learning, they will consciously learn to use it. Second of all, teachers should carefully guide students to use metacognitive strategies correctly, which include setting their own learning objectives, analyzing the learning tasks, self-monitoring, self-regulation and frequent reflection. In addition, teachers should also help students to undertake the necessary metacognitive training so as to improve their ability of self-assessment, self-monitoring and autonomous learning. In short, as for the teaching mode of foreign languages based on network and multimedia technologies, only by grasping metacognitive knowledge, mastering metacognitive ability and applying metacognitive strategies appropriately, can the students' language proficiency be improved greatly and accordingly foreign language teaching in China may have a great breakthrough.

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